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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/769,923	01/25/2001	Jodi F. Aboujaoude	XXT-10	5338
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OLIFF & BERRIDGE PLC P. O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER PHAM, THIERRY L	
			ART UNIT 2624	PAPER NUMBER
DATE MAILED: 01/20/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/769,923	<b>Applicant(s)</b> ABOUJAOUDE ET AL.	
	<b>Examiner</b> Thierry L. Pham	<b>Art Unit</b> 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 4-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

- This action is responsive to the following communication: an Amendment filed on 10/31/05.
- Claims 1-2, and 4-18 are pending; claim 3 had been canceled.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abuyama (US 5144452), and in view of Suzuki et al (US 5621810).

Regarding claim 1, Abuyama discloses a method of forming an output image in an image forming system (image forming system, fig. 2), comprising:

- instructing (instructing via a control panel 80, fig. 2) the system to duplicate the original portion (portion of original image to be duplicate, i.e., character A as shown in fig. 4, col. 7, lines 15-28, fig. 4) of the input document;
- producing (CCD, col. 4, lines 6-20) image data corresponding to only the original portion (only selected portion "letter A" is reproduced as shown in fig. 5) of the input document;
- forming (thermal print head 24a, fig. 2) a duplicate image (duplicating an original image on a single print media, figs. 4-7) of the original portion of the input document; and
- reproducing the duplicate image data a selected number of times (predetermined of times to be duplicated on a single print medium, i.e. character A to be duplicated multiple times as shown in fig. 5 and fig. 7b) on a printing medium.

Abuyama teaches a printing system that allows users/operators to select specific portion of the input document to be replicate/duplicate multiple times by designating X1, X2, Y1, and Y2 coordinates (figs. 4-5, col. 7, lines 5-25), but fails to teach and/or suggest a method of automatically determining location of an original portion of an input document containing image data.

Suzuki, in the same field of endeavor for image forming system (fig. 2), teaches a method of automatically determining location of an original portion (CPU 417 detect exact position of and angle of predetermined image pattern as shown in figs. 11 & 14A, col. 8, lines 31-65) of an input document containing image data.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify image forming system (fig. 1) of Abuyama to include CPU 417 for automatically determining location of an original portion of the document as taught by Suzuki because of a following reason: (●) to automatically determine a location of an original portion of an image pattern within a document without having to manually designate coordinates X1, X2, Y1, and Y2 by operators/users; by doing so, it reduces personnel costs and to increase processing (e.g. printing) speed of the image forming system of Abuyama.

Therefore, it would have been obvious to combine Abuyama with Suzuki to obtain the invention as specified in claim 1.

Regarding claim 2, Abuyama further discloses the method of claim 1, further comprising selecting the number of times (duplication number designator 86, fig. 2) said input image is replicated to form said output image on said printing medium.

Regarding claim 4, Abuyama further discloses the method of claim 1, further comprising receiving user instructions (instruction via control panel, fig. 2) to duplicate only a specific portion of an original document.

Regarding claim 5, Abuyama further discloses a method of forming an output image in an image forming system, comprising:

- obtaining instructions (fig. 7) relating to image formation;
- obtaining input data relating to an original portion (input coordinates, fig. 7a) of an input image and based at least partially on said instructions; and
- forming (thermal head engine 24a, fig. 2) said output image comprising only (only selected portion "letter A" is reproduced as shown in fig. 5) said original portion of the input image replicated one or more times (fig. 7b) on a single printing medium as directed by said

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instructions.

Abuyama teaches a printing system that allows users/operators to select specific portion of the input document to be replicate/duplicate multiple times by designating X1, X2, Y1, and Y2 coordinates (figs. 4-5, col. 7, lines 5-25), but fails to teach and/or suggest a method of automatically determining location of an original portion of an input document containing image data.

Suzuki, in the same field of endeavor for image forming system (fig. 2), teaches a method of automatically determining location of an original portion (CPU 417 detect exact position of and angle of predetermined image pattern as shown in figs. 11 & 14A, col. 8, lines 31-65) of an input document containing image data.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify image forming system (fig. 1) of Abuyama to include CPU 417 for automatically determining location of an original portion of the document as taught by Suzuki because of a following reason: (●) to automatically determine a location of an original portion of an image pattern within a document to be duplicated without having to designate coordinates X1, X2, Y1, and Y2 by operators/users; by doing so, it reduces personnel costs and to increase processing (e.g. printing) speed of the image forming system of Abuyama.

Therefore, it would have been obvious to combine Abuyama with Suzuki to obtain the invention as specified in claim 5.

Regarding claim 6, Abuyama further discloses a method according to claim 5, wherein said obtaining instructions including communicating with a user through a user interface (display 100, fig. 2) and receiving instructions to duplicate only a specific portion of an original document form output image.

Regarding claim 7, Abuyama further discloses the method according to claim 5, wherein said obtaining instructions include receiving of instructions as to which specific original portion (instruction to duplicate portion of original image, fig. 7a-7b) of said input image is to be replicated.

Regarding claim 8, Abuyama further discloses the method according to claim 5, wherein said obtaining instructions include receiving instructions as to a number of replications (figs. 4-5) of said original portion of said input image to be replicated.

Regarding claim 9, Abuyama further discloses the method according to claim 5, wherein obtaining input image data include scanning (read image ST13, fig. 7b) a specific portion of an image to be printed.

Regarding claim 10, Abuyama further discloses the method of claim 5, wherein obtaining input data include receiving a signal from a remote device containing said input image data (inherently, the image forming system as shown in fig. 1 also can be connected to plurality of external devices, i.e. host computer, scanner, and etc, and such system are widely available in the art).

Regarding claim 11, Abuyama further discloses the method according to claim 5, wherein forming the output image include printing said original portion of said input image in a repeated fashion up to a predetermined number (predetermined number of times to be duplicated on a single print media, fig. 7a-7b) in occurrence with said instructions.

Regarding claim 12, Abuyama further discloses the method according claim 5, further comprising automatically detecting dimensions (dimension as shown in fig. 4-5, col. 7, lines 5-67) of said original portion of said input image and automatically determining a predetermined number of repeated original portions (main controller 81 for calculating and determining number of duplicates to be printed on a single sheet of print media, cols. 7-8) of said input images able to be printed on a single printing medium.

Regarding claim 13, Abuyama further discloses the method of claim 5, further comprising allowing a user to specify an offset (left margin, fig. 7b) for said input image on said printing medium.

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Regarding claim 14, Abuyama further discloses an image forming system (fig. 2), comprising:

- an image input stage (ST1, fig. 7A) for receiving image data corresponding to an input image;
- a control stage (control panel 80, fig. 2) for selecting at least an original portion of said input image and replicating only (only selected portion "letter A" is reproduced as shown in fig. 5) said original portion a predetermined number of times (predetermined of times to be duplicated, fig. 7a-7b) to form an output image; and
- an image output stage (print engine, fig. 2) for producing said output image on a printing medium and automatically determining number of times the image portion may be formed on a substrate (automatically calculates number of times the selected image portion to be formed on a single print medium, fig. 5, figs. 7a-7b, col. 8, lines 5-13).

Abuyama teaches a printing system that allows users/operators to select specific portion of the input document to be replicate/duplicate multiple times by designating X1, X2, Y1, and Y2 coordinates (figs. 4-5, col. 7, lines 5-25), but fails to teach and/or suggest an image multiplier for automatically determining location of an original portion of an input document containing image data.

Suzuki, in the same field of endeavor for image forming system (fig. 2), teaches an image multiplier for automatically determining location of an original portion (CPU 417 detect exact position of and angle of predetermined image pattern as shown in figs. 11 & 14A, col. 8, lines 31-65) of an input document containing image data.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify image forming system (fig. 1) of Abuyama to include CPU 417 for automatically determining location of an original portion of the document as taught by Suzuki because of a following reason: (•) to automatically determine a location of an original portion of an image pattern within a document to be duplicated without having to designate coordinates X1, X2, Y1, and Y2 by operators/users; by doing so, it reduces personnel costs and to increase processing (e.g. printing) speed of the image forming system of Abuyama.

Therefore, it would have been obvious to combine Abuyama with Suzuki to obtain the invention as specified in claim 14.

Regarding claim 15, Abuyama further discloses the system of claim 14, wherein said control stage comprises a user interface (display 100, fig. 2) for selecting the number of times said original portion of said input image replicated in said output image on said printing medium.

Regarding claim 16, Abuyama further discloses the system of claim 14, wherein said control stage comprises a user interface (display 100, fig. 2) for providing printing instructions.

Regarding claim 17, Abuyama further discloses the system of claim 14, wherein said control stage determines the number of print image replications that can be reproduced (abstract and col. 1, lines 33-36) in said output image on said printin medium.

Regarding claim 18, Abuyama further dicloses the system of claim 14, wherein said control stage can automatically calculate maximum number of reproductions (abstract and col. 1, lines 33-65) of said original portion of said input image possible for said single printing medium.

### ***Response to Arguments***

Applicant's arguments filed 10/31/05 have been fully considered but they are not persuasive.

- Regarding claim 14, the applicants argued the cited prior arts fail to teach and/or suggest “an image multiplier for automatically scanning an original image portion of a document and automatically determining a number of times the image portion may be formed on a substrate”. In response, the examiner fully disagrees with such arguments. Abuyama explicitly teaches a microprocessor for automatically calculating the number of images possible to be duplicated on a sheet paper based upon its size (abstract and col. 1, lines 48-57, cols. 7-8). As shown in fig. 4, an operator manually designates four coordinates (X1, X2, Y1, and Y2) for designating a suitable image area including the character image “A”. The main controller 81 (fig. 2) then automatically calculates available duplication numbers to be copied on paper sheet P (fig. 5) based upon the designated coordinates. Abuyama teaches a printing system that allows users/operators to select specific portion of the input document to be replicate/duplicate multiple times by designating X1, X2, Y1, and Y2 coordinates (figs. 4-5, col. 7, lines 5-25), but fails to teach and/or suggest a



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method of automatically determining/scanning location of an original portion of an input document containing image data. To remedy Abuyama's deficiency, the examiner is herein relied on Suzuki (US 5144452) for such teachings. Suzuki explicitly teaches a processor for automatically determining location of an original portion (CPU 417 detects exact position of and angle of predetermined image pattern as shown in figs. 11 & 14A, col. 8, lines 31-65 via four coordinates A, B, C, and D) of an input document containing image data. In other words, Abuyama manually selecting and designating four coordinates (X1, X2, Y1, and Y2 of fig. 4) of an image pattern/character, and Suzuki's CPU 417 automatically detecting four coordinates (A, B, C, and D) of an image pattern/character without user intervention. By incorporating CPU 417 of Suzuki onto image processing system of Abuyama helps to eliminate personnel costs and to increase processing (e.g. printing) speed of the image forming system of Abuyama because it can automatically detects coordinates (i.e. X1, X2, Y1, and Y2) of image character "A" (fig. 4) without user invention.

- Regarding claims 1, 5, and 11, the applicants repeatedly argued there is no motivation to combine Abuyama and Suzuki references and provides that Suzuki is teaching away.


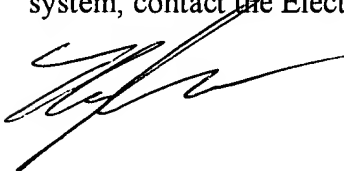
In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, by incorporating CPU 417 of Suzuki onto image processing system of Abuyama helps to eliminate personnel costs and to increase processing (e.g. printing) speed of the image forming system of Abuyama because it can automatically detects coordinates (i.e. X1, X2, Y1, and Y2) of image character "A" (fig. 4) without user invention. The examiner relies upon Suzuki's reference to remedy Abuyama's deficiency of automatically detecting and selecting of coordinates of original image pattern (i.e. pattern "A" as shown in fig. 4), and not for the purpose of duplication of images. Duplications of designated/selected portion of original image is already taught by Abuyama. For above reasons, Suzuki is not teaching away.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L. Pham whose telephone number is (571) 272-7439. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571)272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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PRIMARY EXAMINER